

Notice of Allowability

Application No.

10/652,311

Examiner

Timothy L Rude

Applicant(s)

YOO ET AL.

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 02 September 2003.
 2. ☒ The allowed claim(s) is/are 7-27.
 3. ☒ The drawings filed on 02 September 2003 are accepted by the Examiner.
 4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/892,785.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____
 5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
 6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**
7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 3 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No. <u>20030902</u> | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

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DETAILED ACTION

Claims

Claims 1-6 and 28-32 are canceled.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claim 8, typographical error "to Claim 7, wherein the the gate electrode" is amended to read - - to Claim 7, wherein the gate electrode - - .

The title is amended to read - - A method for fabricating an array substrate for a liquid crystal display with an insulating stack made from TFT layers between crossed conductors - - .

Allowable Subject Matter

Claims 7-27 are allowed.

The following is an examiner's statement of reasons for allowance:

As to claim 7, relevant prior art of record did not disclose, alone or in combination, a method of fabricating an array substrate for a liquid crystal display

Art Unit: 2871

device comprising the steps of: forming a first metal layer on a substrate; patterning the first metal layer to form a gate line, a gate electrode, a gate pad, a first shorting bar, and a second shorting bar; forming a gate insulation layer, a pure amorphous silicon layer, a doped amorphous silicon layer and a second metal layer to cover the patterned first metal layer; patterning the second metal layer and the doped amorphous silicon layer to form first, second and third through-holes and first and second grooves to expose a portion of the pure amorphous silicon layer, the first and second grooves creating an isolated portions of the second metal layer; forming a passivation layer to cover the patterned second metal layer;

forming a source electrode, a drain electrode, a data line, a data pad, an insulating segment, and first, second and third contact holes; and forming a pixel electrode, a first connector and a second connector of a transparent conductive material.

The above steps result in a novel structure for electrically insulating an electrical connector from a shorting bar. The steps are novel in that a portion of the second metal layer is retained in the stack of layers that serve as the electrical insulator between said electrical connector and said shorting bar.

The closest combination is Applicant's admitted prior art (APA) in view of Fulks provided by Applicant. Fulks discloses an electrical insulating stack. However, Fulks does not disclose a metal layer in the electrical insulating stack.

As to claims 8-27, they are directly or indirectly dependent upon claims with allowable subject matter above.

Art Unit: 2871

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Monday through Thursday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on (703) 305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.



Timothy L Rude
Examiner
Art Unit 2871

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TARIFUR R. CHOWDHURY
PRIMARY EXAMINER